

REMARKS

This application has been reviewed in light of the Office Action dated July 26, 2005. Claims 1-6, 12-18, 23, 25-30 and 33 are pending in this case. By the present amendment, claims 1, 5, 12, 13, 23, 25 and 33 have been amended. Claims 7-11, 19-22, 24, 31 and 32 have been cancelled without prejudice. No new matter has been added. The Examiner's reconsideration of the rejection in view of the amendment and the following remarks is respectfully requested.

The Applicant notes with appreciation the allowability of claims 11, 12, 23, 24, 32 and 33 if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

By the Office Action, claim 5 was objected to due to a typographical error. This error is believed to have been corrected by the amendment. Reconsideration of the objection is earnestly solicited.

By the Office Action, claims 11, 23, and 32 stand rejected under §112 second paragraph as being indefinite. The Examiner stated that it was unclear what "the conductive structure includes a pyramidal shape having its base at the pads" means.

Referring to FIGS. 6 and 7, a pyramid structure is shown for the conductive structure (401, 501). Pads 108 form the base of the pyramidal structure, conductors (146 and 142 in FIG. 6 and 162, 166 in FIG. 7) are closer together than the pads 108, with vias connecting the layers of conductors (146 and 142 in FIG. 6 and 162, 166 in FIG. 7). As the structure is built above pads 108 the conductors and vias are disposed closer together. The conductive structures

401, 501 therefore narrow near toward their apex (the connection to lines 114) and therefore form a pyramidal structure.

The description at pages 9 and 10 employs the word “pyramid” to describe the conductive structures 401, 501 (which include conductors and vias). See page 9, lines 6, and page 10 line 6. Pyramidal is the adjective form of pyramid (describes a pyramid or pyramid-like shape). In Webster’s 9th New Collegiate Dictionary, pyramid has the definition of a ... structure built on a broad supporting base and narrowing gradually to an apex. This is the structure shown in, e.g., FIGS. 6 and 7.

Claims 11, 23 and 32 include pads (108) at the base and the conductive structures (vias, and conductors) gradually narrow to an apex (at or near the signal lines 114); hence the conductive structures include a pyramidal shape having its base at the pads 108. The description in the specification and the drawing FIGs. 6 and 7 support this claim language. Therefore, the claim language “conductive structure includes a pyramidal shape having it base at the pads” is believed to be clear and would easily be understood by one skilled in the art. If further clarification is needed, the Examiner is invited to contact the undersigned to further discuss this issue.

By the Office Action, claim 13 stands rejected under §112 second paragraph as being indefinite. The Examiner stated that it was unclear how having vertical vias and horizontal conductors will give the desired function of impedance matching or whether additional structure is needed to achieve this function.

Claim 13 recites, *inter alia*, a multi-layered conductive structure which electrically connects the set of contact pads to at least one signal line, wherein the conductive structure includes vertically disposed vias and horizontally disposed conductors arranged to provide

impedance matching between the pads and the at least one signal line. It is respectfully submitted that the vertically disposed vias and horizontally disposed conductors ARE ARRANGED to provide impedance matching. This is supported by the specification and drawings and is believed to be clear from the language of the claim. Impedance matching may be performed by considering the geometric distance and shapes of the vias and conductors and their arrangement. For example, the vias and the conductors may be symmetrically arranged.

To further clarify this point claim 13 has been amended to recite that the vertically disposed vias and horizontally disposed conductors are arranged and shaped to provide impedance matching between the pads. Reconsideration of the rejection is earnestly solicited.

By the Office Action, claims 1-4, 6, 16, and 25-28 stand rejected under §102(e) as being anticipated by McCall (U.S. Patent No. 6,700,457), hereinafter McCall. Claims 7-10, 13-15, 18-22, 29-31 stand rejected under §103(a) as being unpatentable over McCall. Claims 5 and 17 stand rejected under §103(a) as being unpatentable over McCall in view of U. Ahmad et al. (U.S. Patent No. 5,436,412), hereinafter U. Ahmad.

The Applicant respectfully disagrees with the rejections. The McCall reference is so completely different from the present claims that it fails to disclose or suggest the present invention as claims. McCall provides a planar (single level) conductive pattern which may provide impedance matching, but fails to disclose or suggest the three dimensional structures, arrangements and shapes of the present claims. U. Ahmad fails to cure these deficiencies.

While the Applicant believes that the originally filed claims are not anticipated or rendered obvious in view of the cited references. The Examiner has stated that claims 11, 12, 23, 24, 32, and 33 would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims to overcome the §112, second paragraph rejections.

To further prosecution of the case, claims 10 and 11 have been cancelled without prejudice, and the subject matter of claims 10 and 11 has been added to claim 1. Since claim 11 was deemed allowable by the Examiner if rewritten in independent form, claims 1-6 are believed to be in condition for allowance for at least the reasons stated. In addition, claim 12 has been amended to include the subject matter of claims 1 and 10 in independent form. Since claim 12 was deemed allowable by the Examiner if rewritten in independent form, claim 12 is believed to be in condition for allowance for at least the reasons stated.

To further prosecution of the case, claims 22 and 24 have been cancelled without prejudice, and the subject matter of claims 22 and 24 has been added to claim 13. Since claim 24 was deemed allowable by the Examiner if rewritten in independent form, claims 13-18 are believed to be in condition for allowance for at least the reasons stated. In addition, claim 23 has been amended to include the subject matter of claims 13 and 22 in independent form. Since claim 23 was deemed allowable by the Examiner if rewritten in independent form, claim 23 is believed to be in condition for allowance for at least the reasons stated.

To further prosecution of the case, claims 31 and 32 have been cancelled without prejudice, and the subject matter of claims 31 and 32 has been added to claim 25. Since claim 32 was deemed allowable by the Examiner if rewritten in independent form, claims 25-30 are believed to be in condition for allowance. In addition, claim 33 has been amended to include the subject matter of claims 25 and 31 in independent form. Hence, claim 33 is believed to be allowable as well since claim 33 was deemed allowable by the Examiner if rewritten in independent form.

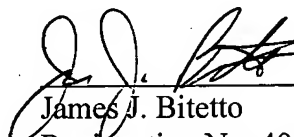
It is respectfully submitted that all pending claims are in condition for allowance. The Applicant reserves the right to pursue the cancelled claims in a separately filed continuation application. Early and favorable consideration is respectfully requested.

The Applicant notes with appreciation the allowability of claims 11, 12, 23, 24, 32 and 33 if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, in view of the foregoing amendments and remarks, it is respectfully submitted that all the claims now pending in the application are in condition for allowance. Early and favorable reconsideration of the case is respectfully requested.

The Office is authorized to charge IBM's Deposit Account the fee of \$600 for the three (3) additional independent claims over three (3). It is believed that no additional fees or charges are currently due. However, in the event that any additional fees or charges are required at this time in connection with the application, they may be charged to applicant's IBM Deposit Account No. 50-0510.

Respectfully submitted,

Date: 8/19/05

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